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EXAMINER

HOYE, MICHAEL W

ART UNIT

PAPER NUMBER

2614

DATE MAILED: 10/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/398,913

Applicant(s)

KLEBANOV ET AL. *M*

Examiner

Michael W. Hoyer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: numerous reference numbers listed throughout the specification are in error when corresponding to their appropriate element number shown in the drawings. On page 4, line 28, demodulator “211” should be --220--; on page 5, line 5, graphics memory “231” should be --330--; on page 8, line 6 and throughout the specification, Window Controller “510” should be --520--; on page 9, lines 2, 12 and throughout the specification, Active Video “640” should be --620--; on page 10, line 4 and throughout the specification, Packer “640” should be --540--; on page 10, line 4 and throughout the specification, Address Generator “630” should be --530--.
 2. On page 6, line 14, the word “Figures” should be singular.
 3. On page 14, line 10, the number “6” is unclear.
 4. On page 16, line 3, the word “bee” should be --been--.
- Appropriate correction is required.

Claim Objections

5. Claim 1 is objected to because of the following informalities: the claim does not end with a period making it unclear as to where the proper ending of the sentence may be.
Appropriate correction is required.
6. Claim 7 is objected to because of the following informalities: there are two sentences in the claim; the proper format for a claim is a single sentence. Appropriate correction is required.

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7. Claim 14 is objected to because of the following informalities: on line 4 the word “control” should be singular in form. Appropriate correction is required.

8. Claim 15 is objected to because of the following informalities: on line 2 there should be a comma between the words “receiving” and “generating”; the word “a” should be deleted twice in line 5, after the word “having” and after the word “and”. The word “controls” on line 8 should be singular in form. Appropriate correction is required.

9. Claim 17 is objected to because of the following informalities: there are two periods at the end of the sentence. Appropriate correction is required.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The language used in the claim stating, “It can also contain...” is indefinite.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

13. Claims 14, and 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Chauvel et al (USPN 6,369,855).

As to claim 14, the Chauvel et al reference discloses a method for receiving video graphics data comprising the steps of receiving a transport stream (as shown in Figure 1B by the Transport Data input), associated with a digital video broadcast signal (Digital Satellite System (DSS) - col. 9, lines 41-42 & col. 11, lines 1-2), the transport stream having data signals and control signals which is met by the digital data in the selected signal (col. 8, lines 45-47) and by receiving MPEG signals in the transfer stream which include data stream and control signals (col. 9, lines 11-13). The claimed step of generating a secondary set of control signals from the transport stream's control signals is met by the traffic controller 310 in Figure 1B. Storing at least a portion of the transport stream data signals in a memory buffer controlled by the secondary set of control signals is met by memory interface 313 and buffer 312a in Figure 18B. Further, the step of sending the contents of the memory buffer to a system bus is met by memory 313 in Fig. 1B being sent through the traffic controller 310 to the system bus 330.

As to claim 18, the Chauvel et al reference discloses in Figure 1A a system for receiving a digital video broadcast signal comprising: a tuner 20 to receive a digital video broadcast signal (col. 8, lines 41-44 & col. 11, lines 1-2) and to provide an analog output signal (col. 8, lines 45-

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47); a demodulator as met by QPSK 30 to receive the output signal from the tuner and to provide a transport stream as shown in Fig. 1B where the transport data enters 210; and a video graphics adapter 200 (as shown in Figures 1A & 1B), which receives the transport stream and has a system interface port 210, the video graphics adapter further includes the claimed video engine 250 (Fig. 1B) and a video output port as shown in Fig. 1A coming out from item 200 as video output and is also shown in greater detail in Fig. 1B.

As to claim 19, the Chauvel et al reference further discloses in Figure 1B a system wherein the video graphics adapter 200 includes a memory 313 to store at least a portion of the data stream.

As to claim 20, the Chauvel et al reference further discloses in Figure 1B a central processing unit 220 (col. 9, lines 10-11) coupled (through the system bus 330) to the system interface port 210 of the video graphics adapter 200; and in FIG. 17C a transport demultiplexor (decryption) coupled to a demodulator (QPSK).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chauvel et al (USPN 6,369,855).

16. As to claim 1, the Chauvel et al reference discloses a video graphics system comprising a transport stream port as shown in Figure 1B by the Transport Data input, to receive a digital video transport stream including a data stream and control signals is met by the digital data in the selected signal (col. 8, lines 45-47) and by receiving MPEG signals in the transfer stream which include data stream and control signals (col. 9, lines 11-13). The claimed transport stream interface control having an input coupled to the transport stream port is met by Figure 1B, module 210, and having an output port for control signals and an output port for video graphics data which is met by connections to the traffic controller 310 and a data port 290 as shown in Figures 1B and 2. Further, a data storage controller coupled to the transport stream controller is met by traffic controller 310 as connected to 210 in Figure 1B. Traffic controller 310 further connects to various data storage elements as shown in Figure 1B. The claimed address port to provide an address value is met by the connection from 310 to the address bus 320 as shown in Figure 1B. The claimed control port to provide control signals is also met by the data bus 330. The reference, however, does not explicitly disclose a sequence of ports as claimed, such as, a first output port, a second output port, etc... These are not patentable distinctions. It would have been clearly obvious to one of ordinary skill in the art at the time the invention was made to configure the ports as necessary for the video graphics system.

As to claim 2, the Chauvel et al reference discloses a memory 313 in Figure 1B & 18B, which is coupled to an output port of the transport stream interface 210, and is coupled to the address port of the data storage controller, and is coupled to the control port of the data storage controller as shown in Figure 1B in elements 313 and 310. As stated above in claim 1, the reference, however, does not explicitly disclose a sequence of ports as claimed such as, a first

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port, a second port, etc... These are not patentable distinctions. It would have been clearly obvious to one of ordinary skill in the art at the time the invention was made to configure the ports as necessary for the memory of the video graphics system.

As to claim 3, the Chauvel et al reference discloses a system wherein the memory is a frame buffer memory as shown in Figure 18B and as described in col. 41, lines 50-51, and col. 129, Table 54, around lines 51-54.

As to claim 4, the Chauvel et al reference discloses a system bus interface having ports connected to the memory as shown in Figure 1B, reference numbers 310 & 313. Again, as stated previously, the reference, however, does not explicitly disclose a sequence of ports as claimed, such as, a first port, a second port, etc... These are not patentable distinctions. It would have been clearly obvious to one of ordinary skill in the art at the time the invention was made to configure the ports as necessary for the system bus interface and memory of the video graphics system.

As to claim 5, the Chauvel et al reference discloses a system with memory having multiple ports as shown in Figures 1B, and 18B. The reference, however, does not explicitly disclose a fourth port of memory that is substantially the same as a second port of the memory. These are not patentable distinctions. It would have been clearly obvious to one of ordinary skill in the art at the time the invention was made to configure the ports as necessary for the memory of the video graphics system.

As to claim 6, the Chauvel et al reference discloses a system wherein the digital video transport stream is a digital video broadcast as described as a digital satellite broadcast signal (col. 8, lines 41-47).

As to claim 7, the Chauvel et al reference discloses a system wherein the control signals of the digital video transport stream include a clock signal (Fig. 4 & 16S), a synchronization signal (see Fig. 4), and a data valid signal (see Fig. 16S). An error signal is also disclosed in Figure 3 as shown by DERROR (col. 12, lines 25-26).

As to claim 8, the Chauvel et al reference discloses a set of control signals that includes a signal or code that is transmitted at the start of each video frame, which would indicate the start of a frame of video (col. 12, lines 56-58).

As to claim 9, the Chauvel et al reference discloses as part of the control signals of the transport stream interface control a valid data output to indicate when data on the output port of the transport stream interface control is active video data as shown in Figure 16S. The reference, however, does not explicitly disclose a second output port of the transport stream interface control. This is not a patentable distinction. It would have been clearly obvious to one of ordinary skill in the art at the time the invention was made to configure the ports as necessary for indicating active video data on a valid data output port of the transport stream interface control of the video graphics system.

As to claim 10, the Chauvel et al reference discloses a system wherein the set of control signals of the transport stream interface control includes a valid vertical blanking interval signal as shown in col. 110, lines 15-16. Chauvel et al teach the use of an on/off bit to indicate if the vertical blanking interval is active or not active. In lines 13-14 of col. 110, Chauvel et al disclose another bit indicating what field is active. The reference, however, does not explicitly disclose indicating when data on a "second" output port of the transport stream interface control is present during the vertical blanking interval. This is not a patentable distinction. It would have

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been clearly obvious to one of ordinary skill in the art at the time the invention was made to configure the ports as necessary and further modify the system of Chauvel et al for indicating when data on a "second" output port as mentioned above would be present during the vertical blanking interval.

17. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chauvel et al as applied to claim 6 above, and further in view of Baker (USPN 6,333,938).

18. As to claim 11, the Chauvel et al reference discloses a video port to receive digital video, a video interface control having an input coupled to the first video port and an output port to provide a set of control signals and an output port to provide video graphics data as described in the claims above. Chauvel et al do not disclose a first video port wherein the digital video is not digital video broadcast stream video. Chauvel et al also do not disclose a select node coupled to the transport stream interface control and to the video interface control. However, Chauvel et al do disclose a front panel (FIG. 1B, item 300-4), which may be used as a select node. The Baker reference discloses a video port to receive digital video of a first type, which is not digital video broadcast stream video as shown in Figure 1 by port 18 receiving video from a digital VCR 54. Baker also discloses a potential select node as shown in Fig. 1 by the User Defined Function (AUX) item 40. It would have been clearly obvious to one of ordinary skill in the art at the time the invention was made to modify the system disclosed by Chauvel et al to include the additional features of Baker for the advantage of having multiple video ports with the capability of receiving other types of video signals, not just digital video broadcast signals, such as digital VCR's, digital cameras, DVD's, etc... In addition to, another advantage provided by the Baker

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reference includes the user defined function, which could be used for multiple purposes including a "select node". Baker teaches the use of multiple video input signals from various sources including a video cable set top box, a digital VCR, and a desktop camera, in addition to having a user defined function selection or "select node".

As to claim 12, using the Chauvel et al and Baker references as combined above, Baker further discloses a system wherein the first video port is a zoom video port as shown in Fig. 1, element 42.

As to claim 13, using the Chauvel et al and Baker references as combined above, Baker further discloses a system wherein the first video port is a digital video stream port as represented by the Digital VCR 54 in Figure 1.

19. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chauvel et al as applied to claim 14 above, and further in view of Baker.

20. As to claim 15, the Chauvel et al reference discloses the method of claim 14 wherein the steps of receiving, generating and storing occur in a mode of operation. Chauvel et al disclose the steps of receiving a digital video signal having data signals and control signals as met by the digital data in the selected signal (col. 8, lines 45-47) and by receiving MPEG signals in the transfer stream which include data stream and control signals (col. 9, lines 11-13); generating a secondary set of control signals from the digital video signal's control signals as met by the traffic controller 310 in Figure 1B; and storing at least a portion of the digital video signal in the memory buffer based on the secondary set of control signals as met by memory interface 313 and buffer 312a in Figure 18B. Chauvel et al do not disclose multiple modes of operation, as well as,

receiving a digital video signal that is of a different type than the transport stream. Baker discloses multiple modes of operation and a method of receiving a digital video signal that is of a different type than the transport stream, which is met by the various peripheral devices shown in Fig. 1, such as, a digital VCR, all these devices are connected by means of the 1394 serial bus. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Chauvel et al with the teachings of Baker, so that a method comprising various modes of operation, including, receiving a transport stream associated with a digital video broadcast signal or receiving a digital video signal that is of a different type than the transport stream could be achieved.

As to claim 16, using the Chauvel et al and Baker references as combined above, Baker further discloses a method wherein the video signal is a zoom video signal as shown in Fig. 1, element 42.

As to claim 17, using the Chauvel et al and Baker references as combined above, Baker further discloses a method wherein the memory buffer is a frame buffer as described in col. 8, line 15, and Chauvel et al also further disclose a method wherein the memory buffer is a frame buffer as shown in Fig. 18B, element 312a.

21. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Flurry (USPN 5,898,441).

22. As to claim 21, the claimed method of storing video data comprising the steps of: in a first mode of operation storing pixel information in a frame buffer of a video adapter, wherein one line of frame buffer memory is representative of one line of a video image to be displayed; and in

a second mode of operation, storing compressed transport stream data in the frame buffer, wherein one line of frame buffer memory is representative of one transport stream packet is met by Flurry in col. 5, lines 30-42. Flurry discloses a method that the images may be stored in a variety of formats and sizes, in addition, the images are available for scaling, conversion, or other operations. Therefore, it would have been obvious to one of ordinary skill in the art to further modify the method of Flurry et al. to include a first mode of operation and a second mode of operation as described above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bose et al. (USPN 6,088,047) – Discloses digital video decoding with buffered picture storage. Teaches the use frame buffer memory for one line of a video image.

Boyce et al. (USPN 5,635,985) – Discloses joint HD/SD television decoder methods and apparatus.

Chimoto et al. (USPN 5,838,383) – Discloses a multimedia television receiver with a system bus.

Duffield et al. (USPN 5,461,427) – Discloses a television receiver having the capability to receive both HDTV and NTSC channels.

Gimby, Robert William (USPN 5,850,266) – Discloses a multiport video interface supporting a variety of data formats and further discloses a frame buffer memory.

Hirahata et al. (USPN 5,132,793) – Discloses a television receiver that is compatible with both standard system television signals and high definition television signals.

Hirano et al. (USPN 6,144,412) – Discloses a method and circuit for signal processing of format conversion of a picture signal.

Kobayashi, Satoshi (USPN 6,275,267) – Discloses a television receiver for receiving a plurality of formats of video signals having different resolutions.

Lee, Doug H. (USPN 5,519,446) – Discloses an apparatus and a method for converting an HDTV signal to a non-HDTV signal and also uses frame buffer memory.

Lee, Doug H. (US RE 37,057 E) – Discloses an apparatus and a method for converting an HDTV signal to a non-HDTV signal and also uses frame buffer memory.

Lee, Yong-hyun (USPN 5,828,418) – Discloses a video display controlling device for making transformations prior to display. Also discloses an address selection controlling unit and an image mode setting unit.

Sato et al. (USPN 5,534,940) – Discloses displaying various types of television system formats.

Shin, Hyun-soo (USPN 6,108,044) – Discloses a receiver for receiving both HDTV and NTSC signals and a method for selecting the signals.

Uwabata et al. (USPN 6,211,918) – Discloses a video signal converter and television signal processing apparatus for varied display sizes.

Voltz et al. (USPN 6,295,090) – Discloses compensating video resolution when changing video sources, also includes the use of frame buffer memory and a PCI bus.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael W. Hoyer whose telephone number is (703) 305-6954.

The examiner can normally be reached on Monday to Friday from 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller, can be reached at (703) 305-4795.

Any response to this action should be mailed to:

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or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Michael W. Hoyer
September 27, 2002


JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600